



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0470; Project Identifier MCAI-2021-01002-T; Amendment 39-22112; AD 2022-14-07]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. This AD was prompted by reports that some oxygen box assemblies had their piston ejected during the mask deployment test. This AD requires a one-time inspection of each passenger oxygen box dual manifold assembly to find and replace affected parts. This AD also prohibits installing affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email

ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0470.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0470; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Elizabeth Dowling, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2021-30, dated September 7, 2021 (TCCA AD CF-2021-30) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0470.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. The NPRM published in the *Federal Register* on April 26, 2022 (87 FR 24476). The NPRM was prompted by reports that some oxygen box assemblies had their piston ejected during the mask deployment test. The NPRM proposed to require a one-time inspection of each passenger oxygen box dual manifold assembly to find and replace affected parts. The NPRM also proposed to prohibit installing affected parts. The FAA is issuing this AD to address a possible in-service piston ejection when used for emergency descent, smoke, or fire that may result in a high rate of oxygen leakage, which could prematurely deplete the oxygen for all passengers. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information under 1 CFR Part 51

Bombardier, Inc., has issued the following service information.

- Service Bulletin 700-35-5004, Revision 02, dated August 27, 2021.
- Service Bulletin 700-35-5502, dated August 27, 2021.
- Service Bulletin 700-35-6004, Revision 05, dated August 27, 2021.

- Service Bulletin 700-35-6502, dated August 27, 2021.

This service information describes procedures for inspecting each passenger oxygen box dual manifold assembly to find affected parts, and replacing affected parts.

These documents are distinct because they apply to different airplane configurations.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 308 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
1 work-hour X \$85 per hour = \$85	\$0	\$85	\$26,180

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need this on-condition action:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
Up to 34 work-hours X \$85 per hour = \$2,890	Up to \$1,700	Up to \$4,590

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-14-07 Bombardier, Inc.: Amendment 39-22112; Docket No. FAA-2022-0470;

Project Identifier MCAI-2021-01002-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 35, Oxygen.

(e) Unsafe Condition

This AD was prompted by reports that some passenger oxygen box dual manifold had their piston ejected during the mask deployment test due to a non-conformity in manufacturing. The FAA is issuing this AD to address a possible in-service piston ejection when used for emergency descent, smoke, or fire that may result in a high rate of oxygen leakage, which could prematurely deplete the oxygen for all passengers.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Definition

An affected part is a passenger oxygen box assembly having a dual manifold assembly having part number 100-009-39 and a lot and serial number specified in figure 1 to paragraph (g) of this AD.

Figure 1 to paragraph (g) – Affected Part

Lot Numbers Affected	Serial Numbers Affected
3516-001	3516-001-01 through 3516-001-60 inclusive
3538-002	3538-002-01 through 3538-002-60 inclusive
3598-001	3598-001-01 through 3598-001-60 inclusive
3568-001	3568-001-01 through 3568-001-60 inclusive
3724-001	3724-001-01 through 3724-001-20 inclusive
3724-002	3724-002-01 through 3724-002-12 inclusive
3706-001	3706-001-01 through 3706-001-40 inclusive

(h) Required Actions

Within the applicable compliance time specified in paragraph (h)(1) or (2) of this AD: Inspect each passenger oxygen box dual manifold assembly to determine if it is an affected part, as defined in paragraph (g) of this AD, and replace any affected part in accordance with paragraph 2.B. of the Accomplishment Instructions of the applicable Bombardier service bulletin specified in figure 2 to paragraph (h) of this AD. Replace any affected part before further flight.

(1) For airplanes having serial numbers 9771, 9779, 9784, 9788 through 9824 inclusive, 9853 through 9857 inclusive, and 9859 through 9876 inclusive, within 4 months after the effective date of this AD.

(2) For airplane having serial numbers 9877 through 9879 inclusive, and 60001 through 60042 inclusive, within 30 months after the effective date of this AD.

Figure 2 to paragraph (h) – Applicable Service Bulletins

Airplane Model and Serial Numbers	Applicable Service Bulletin
BD-700-1A10, serial numbers 9771, 9779, 9784, 9788, 9789, 9791 through 9797 inclusive, 9799 through 9806 inclusive, 9808, 9809, 9811, 9812, 9814 through 9818 inclusive, 9820 through 9824 inclusive, 9853 through 9857 inclusive, 9859, 9860, 9863 through 9871 inclusive, 9873 through 9879 inclusive, and 60005 through 60042 inclusive	700-35-6004, Revision 05, dated August 27, 2021
BD-700-1A10, serial numbers 9861, 9872, and 60001 through 60042 inclusive	700-35-6502, dated August 27, 2021
BD-700-1A11 serial numbers 9790, 9798, 9807, 9810, 9813, 9819, 9853 through 9857 inclusive, 9859 through 9862 inclusive, and 9868 through 9879 inclusive	700-35-5004, Revision 02, dated August 27, 2021
BD-700-1A11, serial numbers 60007 through 60042 inclusive	700-35-5502, dated August 27, 2021

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install an affected part as defined in paragraph (g) of this AD, on any airplane.

(j) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraphs (j)(1) through (7) of this AD, as applicable.

(1) Bombardier Service Bulletin 700-35-5004, dated December 10, 2018.

(2) Bombardier Service Bulletin 700-35-5004, Revision 01, dated November 29, 2019.

(3) Bombardier Service Bulletin 700-35-6004, dated December 10, 2018.

(4) Bombardier Service Bulletin 700-35-6004, Revision 01, dated January 16, 2019.

(5) Bombardier Service Bulletin 700-35-6004, Revision 02, dated April 5, 2019.

(6) Bombardier Service Bulletin 700-35-6004, Revision 03, dated May 31, 2019.

(7) Bombardier Service Bulletin 700-35-6004, Revision 04, dated November 29, 2019.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(l) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2021-30, dated September 7, 2021, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0470.

(2) For more information about this AD, contact Elizabeth Dowling, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference

is available at the addresses specified in paragraphs (m)(4) and (5) of this AD.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 700-35-5004, Revision 02, dated August 27, 2021.

(ii) Bombardier Service Bulletin 700-35-5502, dated August 27, 2021.

(iii) Bombardier Service Bulletin 700-35-6004, Revision 05, dated August 27, 2021.

(iv) Bombardier Service Bulletin 700-35-6502, dated August 27, 2021.

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on June 27, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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